IN THE CLAIMS

Please amend the claims as follows:

1. (Previously Presented) A device configured to be coupled to a heart, the device comprising:

an exciter to generate a current field in the heart;

a first pair of electrodes;

a second pair of electrodes; and

a processor coupled to the first pair of electrodes and the second pair of electrodes and adapted to generate first impedance information as a function of a first voltage received by the first pair of electrodes in response to the current field, generate second impedance information as a function of a second voltage received by the second pair of electrodes in response to the current field, determine a first ventilation rate using the first impedance information, determine a second ventilation rate using the second impedance information, and compare the first ventilation rate to the second ventilation rate to determine whether the first ventilation rate differs from the second ventilation rate.

2. (Previously Presented) The device of claim 1 wherein the processor is adapted to generate an error code if the first ventilation rate differs from the second ventilation rate.

3. (Previously Presented) The device of claim 1 wherein the processor is adapted to alternately monitor the first pair of electrodes and the second pair of electrodes.

4. (Previously Presented) The device of claim 1 further including a therapy circuit coupled to the processor wherein the therapy circuit is adapted to deliver a therapy using a result of comparing the first ventilation rate to the second ventilation rate.

5. (Original) The device of claim 4 wherein the therapy circuit includes a pulse generator.

6. (Original) The device of claim 1 wherein the processor includes a filter to pass frequencies in a ventilation band.

7. (Previously Presented) The device of claim 1 further including an accelerometer coupled to the processor and adapted to provide an acceleration signal and wherein the processor is adapted to cross check the first ventilation rate and the second ventilation rate with the acceleration signal.

8. (Canceled)

9. (Previously Presented) The device of claim 7 wherein the processor is adapted to generate a pacing rate using impedance information selected from one of the first impedance information and the second impedance information using a result of comparing the first ventilation rate to the second ventilation rate and a result of cross checking the first ventilation code and the second ventilation code with the acceleration signal.

10. (Canceled)

11. (Previously Presented) An implantable system configured to be coupled to a heart in a thorax, the system comprising:

a plurality of sensors, each sensor adapted to sense a thoracic parameter and provide a signal, the plurality of sensors including a first ventilation sensor adapted to sense a first impedance associated with a first chamber of the heart in the thorax and a second ventilation sensor adapted to sense a second impedance associated with a second chamber of the heart;

a therapy circuit adapted to deliver therapy to the heart; and

a processor coupled to each sensor of the plurality of sensors and coupled to the therapy circuit and wherein the processor is adapted to compare the signals received from the plurality of sensors and adjust a pacing rate using a result of the comparison.

12. (Original) The system of claim 11 wherein the plurality of sensors includes an acceleration sensor.

13. (Original) The system of claim 11 further including an excitation circuit coupled to the heart and adapted to provide a transthoracic current field.

14. (Previously Presented) An implantable system configured to be coupled to a heart having a first chamber and a second chamber, the system comprising:

a first sensor to provide a first signal indicative of a first ventilation rate derived from the first chamber of the heart;

a second sensor to provide a second signal indicative of a second ventilation rate derived from the second chamber of the heart; and

a processor coupled to the first sensor and coupled to the second sensor and adapted to determine a first ventilation rate using the first signal, determine a second ventilation rate using the second signal, and determine a difference between the first ventilation rate and the second ventilation rate.

15. (Original) The system of claim 14 wherein at least one sensor of the first sensor and the second sensor includes a transthoracic impedance sensor.

16. (Original) The system of claim 14 wherein at least one sensor of the first sensor and the second sensor includes a pair of excitation electrodes and a pair of sensor electrodes.

17. (Original) The system of claim 14 further including an activity sensor coupled to the processor to provide an activity signal based on a detected physical activity.

18. (Original) The system of claim 17 wherein the activity sensor includes an accelerometer.

19. (Previously Presented) The system of claim 14 further including a therapy circuit coupled to the processor and wherein the therapy circuit is adapted to deliver a therapy using the difference between the first ventilation rate and the second ventilation rate.

20. (Original) The system of claim 19 wherein the therapy circuit includes a pulse generator.

21. (Previously Presented) An implantable device comprising:

an excitation channel to generate a current field in a heart;

a first impedance sensor to generate a first impedance signal based on a first voltage associated with a first chamber of the heart;

a second impedance sensor to generate a second impedance signal based on a second voltage associated with a second chamber of the heart;

a first accelerometer to generate a first acceleration signal based on a detected acceleration associated with the heart;

a signal processor coupled to the first impedance sensor and adapted to generate a first ventilation signal using the first impedance signal and coupled to the second impedance sensor and adapted to generate a second ventilation signal using the second impedance signal; and

a processor adapted to receive the first ventilation signal, the second ventilation signal and the first acceleration signal and adapted to cross check the first ventilation signal and the second ventilation signal with the first acceleration signal.

22. (Original) The implantable device of claim 21 wherein the first accelerometer has a first axis of sensitivity and further including a second accelerometer having a second axis of sensitivity wherein the first axis intersects the second axis and further wherein the processor is adapted to receive the second acceleration signal.

23. (Original) The implantable device of claim 21 further including a telemetry circuit coupled to the processor and adapted to communicate with a remote programmer.

24. (Previously Presented) The implantable device of claim 22 wherein the processor is adapted to cross check the first ventilation signal and the second ventilation signal with the second acceleration signal.

25. (Currently Amended) A method comprising:

receiving a first signal indicative of a first ventilation rate derived from a first chamber of a heart;

receiving a second signal indicative of a second ventilation rate derived from a second chamber of the heart;

comparing the first ventilation rate to the second ventilation rate; and

adjusting a pacing therapy using a result of comparing the first ventilation rate to the second ventilation [[code]] rate.

26. (Original) The method of claim 25 wherein at least one of receiving the first signal and receiving the second signal includes receiving an impedance signal.

27. (Currently Amended) The method of claim 25 further including receiving an acceleration signal based on a detected acceleration and wherein [[the]] a code is generated as a function of the detected acceleration.

28. (Previously Presented) The method of claim 25 further including adjusting a pacing rate using a difference between the first ventilation rate and the second ventilation rate.

29. (Previously Presented) An implantable system configured to be coupled to a heart having a first chamber and a second chamber, the system comprising:

a first sensor adapted to provide a first impedance signal for the first chamber of the heart;

a second sensor adapted to provide a second impedance signal for the second chamber of the heart; and

a processor coupled to the first sensor and coupled to the second sensor and adapted to determine a first ventilation rate using the first impedance signal and a second ventilation rate using the second impedance signal and further adapted to determine whether the first ventilation rate substantially differs from the second ventilation rate.

30. (Original) The system of claim 29 wherein the first sensor includes a pair of excitation electrodes coupled to the first chamber.

31. (Original) The system of claim 29 wherein the first sensor includes a pair of sensor electrodes coupled to the first chamber.

32. (Original) The system of claim 29 further including a filter to pass the first impedance signal and the second impedance signal.

33. (Previously Presented) The system of claim 29 further including a therapy circuit coupled to the processor wherein the therapy circuit is adapted to deliver therapy as a function of a difference between the first ventilation rate and the second ventilation rate.

34. (Previously Presented) The system of claim 33 wherein the processor is adapted to provide a first therapy signal to the therapy circuit when the first ventilation rate does not substantially differ from the second ventilation rate and adapted to provide a second therapy signal to the therapy circuit when the first ventilation rate substantially differs from the second ventilation rate and wherein the therapy circuit delivers a first therapy regimen when the first therapy signal is received and a second therapy regimen when the second therapy signal is received.

35. (Previously Presented) The system of claim 29 further including a first accelerometer coupled to the processor and adapted to provide a first acceleration signal and wherein the processor is adapted to select one of the first ventilation rate and the second ventilation rate based

on the first acceleration signal when the first ventilation rate substantially differs from the second ventilation rate.

36. (Previously Presented) The system of claim 35 wherein the processor is adapted to select one of the first ventilation rate and the second ventilation rate by cross checking the first ventilation rate and the second ventilation rate with the first acceleration signal.

37. (Previously Presented) The system of claim 36 wherein the first accelerometer has a first axis of sensitivity and further including a second accelerometer coupled to the processor to provide a second acceleration signal, the second accelerometer having a second axis of sensitivity and wherein the first axis intersects the second axis and the processor is adapted to select one of the first ventilation rate and the second ventilation rate by cross checking the first ventilation rate and the second ventilation rate with the first acceleration signal and the second acceleration signal.

38-45. (Canceled)

46. (Previously Presented) A method comprising:

receiving a plurality of input signals corresponding to two or more chambers of a heart, the plurality of input signals including a first ventilation rate derived from a first impedance associated with a first chamber of the heart and a second ventilation rate derived from a second impedance associated with a second chamber of the heart;

using a processor to detect a similarity between signals of the plurality of input signals including at least the first ventilation rate and the second ventilation rate; and

delivering therapy to the heart based on the detected similarity.

47. (Original) The method of claim 46 wherein receiving a plurality of input signals includes receiving a first accelerometer signal from a first accelerometer, the first accelerometer disposed proximate the heart.

48. (Original) The method of claim 47 wherein receiving a plurality of input signals includes receiving a second accelerometer signal from a second accelerometer, the second accelerometer disposed proximate the heart, the first accelerometer having a first axis of sensitivity and the second accelerometer having a second axis of sensitivity and wherein the first axis intersects the second axis.

49. (Previously Presented) The method of claim 47 wherein delivering therapy includes delivering a first therapy regimen if the similarity exists in the first ventilation rate and the second ventilation rate and delivering a second therapy regimen if the similarity does not exist in the first ventilation rate and the second ventilation rate.

50. (Original) The method of claim 49 wherein receiving the plurality of input signals includes receiving an acceleration signal and wherein delivering a second therapy regimen includes selecting a therapy regimen based on the acceleration signal.

51. (Original) The method of claim 46 wherein receiving a plurality of input signals includes generating an excitation current field using a first electrode pair and sensing a voltage using a second electrode pair.

52. (Original) The method of claim 46 wherein determining therapy includes selecting the therapy and wherein using the processor to compare each input signal includes identifying an inappropriate input signal in the plurality of input signals and wherein delivering therapy includes de-emphasizing the inappropriate input signal in selecting the therapy.

53. (Previously Presented) A system configured to be coupled to a thorax including a heart, the system comprising:

means for generating a current field in the thorax;

means for generating a first ventilation signal based on a first transthoracic impedance measured by a first pair of electrodes responsive to a first chamber of the heart in the thorax;

means for generating a second ventilation signal based on a second transthoracic impedance measured by a second pair of electrodes responsive to a second chamber of the heart;

first accelerometer means adapted to be coupled to the heart and adapted to provide a first acceleration signal as a function of a sensed acceleration associated with the heart along a first axis;

processor means coupled to the means for generating the first ventilation signal and coupled to the means for generating the second ventilation signal and coupled to the first accelerometer means and adapted to generate a code as a function of a detected similarity between the first ventilation signal, the second ventilation signal and the first acceleration signal; and

therapy means coupled to the processor means and adapted to deliver therapy to the heart as a function of the detected similarity.

54. (Original) The system of claim 53 further including a second accelerometer means coupled to the heart and adapted to provide a second acceleration signal as a function of a sensed acceleration associated with the heart along a second axis, wherein the first axis intersects the second axis.

55. (Original) The system of claim 53 further including telemetry means coupled to the processor means and adapted to communicate with a remote programmer.